

TABLE 21
Companies with domestic R&D paid for by the company and others and performed by the company in the nanotechnology focus area, by industry and company size: 2020

(Millions of U.S. dollars and number of companies)

Industry and company size	NAICS code	Domestic R&D		Nanotechnology R&D							
		Companies ^a (number)	Amount	Total		Paid for by the company		Paid for by others			
				Companies ^b (number)	Amount	Companies ^b (number)	Amount	Companies ^b (number)	Amount		
All industries	21-23, 31-33, 42-81	30,360	537,619	1,070	22,422	980	20,721	140	1,701		
Manufacturing industries	31-33	15,920	308,445	780	19,309	760	18,167	70	1,143		
Food	311	970	5,239	10	2	10	2	0	0		
Beverage and tobacco products	312	240	1,177	10	7	10	7	0	0		
Textile, apparel, and leather products	313-16	230	822	0	0	0	0	0	0		
Wood products	321	130	187	10	*	10	*	0	0		
Paper	322	100	928	10	17	10	17	0	0		
Printing and related support activities	323	220	283	0	0	0	0	0	0		
Petroleum and coal products	324	100	1,311 - 1,324	10	3	10	3	0	0		
Chemicals	325	2,550	101,079	220	409	210	370	20	39		
Basic chemicals	3251	300	2,694	50	135	50	126	10	9		
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	150	1,234	70	51	60	50	10	*		
Pesticide, fertilizer, and other agricultural chemicals	3253	130	1,060 - 1,066	20	15	20	15	0	0		
Pharmaceuticals and medicines	3254	1,230	91,776	30	151	30	125	10	26		
Soap, cleaning compound, and toilet preparation	3256	370	2,665	10	2	10	2	0	0		
Paint, coating, adhesive, and other chemicals	3255, 3259	400	1,643 - 1,649	60	55	60	51	10	5		
Plastics and rubber products	326	1,040	2,634	70	45	70	45	0	0		
Nonmetallic mineral products	327	240	1,717	10	12	10	9	10	3		
Primary metals	331	270	815	10	3	10	3	0	0		
Fabricated metal products	332	2,270	3,396	10	14	10	14	0	0		
Machinery	333	2,120	16,223	90	1,196	90	1,174	10	22		
Agricultural implement	33311	160	1,769 - 1,811	0	0	0	0	0	0		
Semiconductor machinery	333242	60	4,807	10	1,134	10	1,115	10	19		
Engine, turbine, and power transmission equipment	3336	90	1,645	0	0	0	0	0	0		
Other machinery	other 333	1,830	7,959 - 8,001	90	61	90	59	10	2		
Computer and electronic products	334	2,220	99,535	200	17,183	180	16,211	40	972		
Communications equipment	3342	400	12,103	10	0 - 150	10	0 - 150	0	0		
Semiconductor and other electronic components	3344	570	43,181	100	16,634	90	15,790	40	844		
Navigational, measuring, electromedical, and control instruments	3345	1,060	18,505	100	401	100	273	10	128		
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	190	2,858	10	14	10	14	0	0		
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	130	10,586	20	62 - 191	20	62 - 192	10	0 - 129		

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				Companies ^b (number)	Amount	Companies ^b (number)	Amount	Companies ^b (number)	Amount		
Other measuring and controlling device	other 3345	740	5,061	80	197	80	68 - 198	10	0 - 129		
Other computer and electronic products	other 334	210	25,747	10	0 - 150	10	0 - 150	0	0		
Electrical equipment, appliances, and components	335	680	4,998	140	52	140	52	0	0		
Transportation equipment	336	980	48,796	20	245	20	139	10	106		
Motor vehicles, bodies, trailers, and parts	3361-63	490	23,121	10	11	10	9	10	3		
Aerospace products and parts	3364	340	22,914	10	234	10	131	10	103		
Aircraft, aircraft engine, and aircraft parts	336411-13	310	21,291	10	234	10	131	10	103		
Guided missile, space vehicle, and related parts	336414-15, 336419	40	1,623	10	*	10	*	0	0		
Military armored vehicle, tank, and tank component	336992	10	11	0	0	0	0	0	0		
Other transportation	other 336	140	2,750	0	0	0	0	0	0		
Furniture and related products	337	240	496	10	1	10	1	0	0		
Miscellaneous	339	1,430	18,791 - 18,809	30	121	30	120	10	1		
Medical equipment and supplies	3391	840	16,116	30	79	30	78	10	1		
Other miscellaneous manufacturing	3399	600	2,674 - 2,692	10	42	10	42	0	0		
Nonmanufacturing industries	21-23, 42-81	14,460	229,174	290	3,113	230	2,554	80	559		
Mining, quarrying, oil and gas extraction, and support activities	21	300	1,165	10	3	10	1	10	1		
Utilities	22	50	264	0	0	0	0	0	0		
Wholesale trade	42	1,160	1,058	10	2	10	2	0	0		
Electronic shopping and electronic auctions	454111-12	90	3,840 - 19,390	0	0	0	0	0	0		
Transportation and warehousing	48-49	60	4,957	0	0	0	0	0	0		
Information	51	3,810	129,463	30	1,362	30	1,356	10	6		
Publishing	511	1,680	35,025	30	1,354	30	1,348	10	6		
Newspaper, periodical, book, and directory publishers	5111	30	60	0	0	0	0	0	0		
Software publishers	5112	1,650	34,965	30	1,354	30	1,348	10	6		
Telecommunications	517	140	3,425 - 3,437	0	0	0	0	0	0		
Data processing, hosting, and related services	518	1,660	41,551	10	8	10	8	0	0		
Other information	other 51	350	49,449 - 49,463	0	0	0	0	0	0		
Finance and insurance	52	220	12,296	0	0	0	0	0	0		

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		Companies ^a (number)	Amount	Total		Paid for by the company		Paid for by others		
				Companies ^b (number)	Amount	Companies ^b (number)	Amount	Companies ^b (number)	Amount	
Real estate and rental and leasing	53	60	3,249	0	0	0	0	0	0	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	20	7	0	0	0	0	0	0	0
Other real estate and rental and leasing	other 53	40	3,242	0	0	0	0	0	0	0
Professional, scientific, and technical services	54	6,980	54,367	250	i 1,733	i 190	i 1,182	80	i 551	i
Architectural, engineering, and related services	5413	1,390	4,214	30	i 43	i 20	i 22	20	i 21	i
Computer systems design and related services	5415	2,780	17,935	30	i 1,225	i 20	i 826	20	i 398	i
Scientific research and development services	5417	1,710	25,600	140	i 258	i 100	i 160	i 50	99	
Research and development in nanotechnology	541713	110	i 179	i 50	i 131	i 30	i 84	i 20	i 47	i
Research and development in biotechnology (except nanobiotechnology)	541714	350	6,191	30	i 18	i 20	i 16	i 10	i 2	i
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	1,250	18,539	i 70	i 109	i 50	i 60	30	50	
Research and development in the social sciences and humanities	541720	20	691	0	0	0	0	0	0	
Other professional, scientific, and technical services	other 54	1,110	6,618	80	i 207	i 70	i 174	10	i 32	i
Health care services	621–23	620	1,477	10	13	10	13	0	0	
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	1,160	1,491 - 17,041	0	0	0	0	0	0	
All companies (number of domestic employees)	–	30,360	537,619	1,070	i 22,422	i 980	i 20,721	i 140	i 1,701	i
Small companies										
10–19 ^c	–	5,110	5,047	180	i 185	i 150	i 150	i 40	i 35	i
20–49	–	9,510	12,994	390	i 373	i 360	i 282	i 40	i 91	i
Medium companies										
50–99	–	5,530	12,993	140	i 268	i 130	i 205	i 30	i 63	
100–249	–	4,950	25,411	170	i 331	i 160	i 307	20	24	i
Large companies										
250–499	–	2,100	20,878	70	i 783	i 60	i 601	10	i 182	i
500–999	–	1,280	21,264	40	410	i 40	227	i 10	183	i
1,000–4,999	–	1,320	88,238	70	4,193	i 60	3,429	i 10	764	i
5,000–9,999	–	260	48,397	30	1,833	i 30	1,766	i 10	68	
10,000–24,999	–	220	88,567	20	7,350	i 20	7,240	i 10	109	i
25,000 or more	–	130	213,829	20	6,696	i 20	6,514	i 10	182	i

* = amount < \$500,000; i = more than 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2017 North American Industry Classification System.

^a Beginning in survey year 2018, these statistics include an adjustment to the weight to account for unit nonresponse; beginning in survey year 2019, these company count estimates reflect a change in rounding methodology.

^b Beginning in survey year 2018, these statistics include an adjustment to the weight to account for unit nonresponse; beginning in survey year 2019, these company count estimates reflect a change in rounding methodology. These company count estimates also reflect an imputation process implemented for survey year 2014. This change has affected the comparability of these company count estimates with estimates published for years prior to 2014.

^c The Business Enterprise Research and Development Survey does not include companies with fewer than 10 domestic employees.

Note(s):

Detail may not add to total because of rounding. Industry classification is based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. Statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D and are not comparable with estimates published for years prior to 2018. Companies could report R&D in one, more than one, or no application area. An estimate range may be displayed in place of a single estimate to avoid disclosing operations of individual companies.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2020.